

REMARKS

Applicant hereby responds to the final Office Action of June 15, 2007, in the above-referenced patent application. Claims 1-28 are pending. Applicant thanks the Examiner for carefully considering the present application, and for indicating that claims 4-10, 14, 18-24 and 27-28 contain allowable subject matter.

Rejections under 35 U.S.C. § 103(a)

Claims 1 and 15

Claims 1 and 15 stand rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 4,853,970 (“Ott”) in view of U.S. Patent No. 5,712,682 (“Hannah”). For at least the following reasons, the rejections are respectfully traversed.

The claimed invention is directed to image detail enhancement without zigzagged edge artifact. Independent claims 1 and 15 each require, in part, that the enhancement is performed in the “luminance transition range of an image edge.” By contrast, Ott and Hannah, whether considered separately or in combination, fail to show or suggest at least such claimed limitations.

The instant Office Action has equated the *transition region* as taught by Ott and Hannah to the claimed “luminance transition range.” Applicant respectfully disagrees.

The claimed “luminance transition range” includes the length of the luminance transitioning area of an edge, which is substantially along the direction of the edge, as clearly defined in the Specification of the present application. By way of example, Figs. 2A and 2B of the specification (reproduced below) illustrate instances of such a luminance transition range.

FIG. 2A

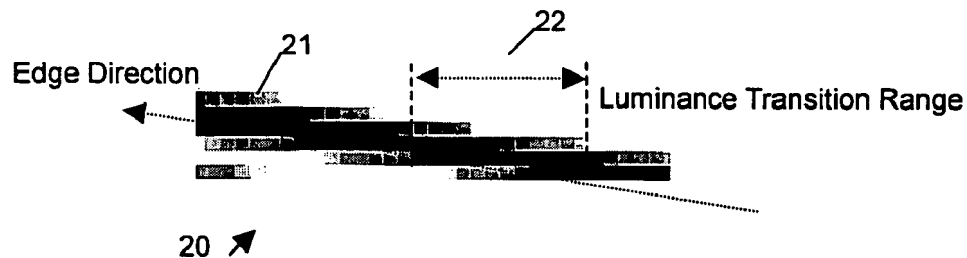
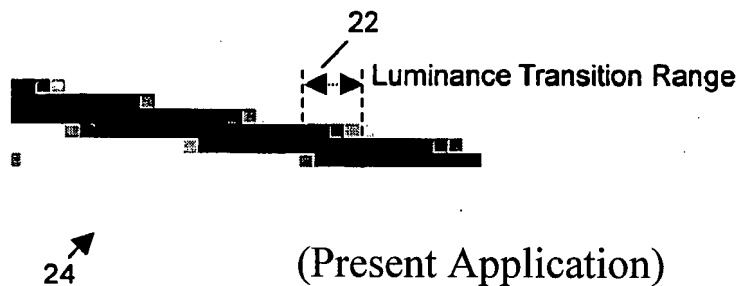
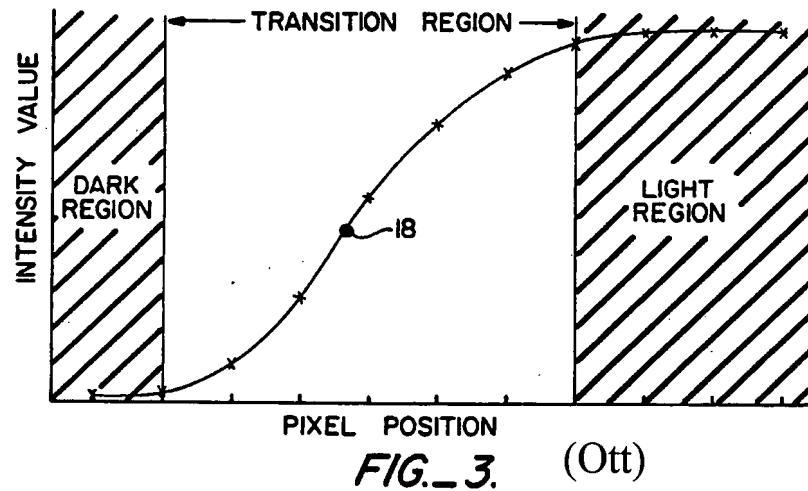


FIG. 2B

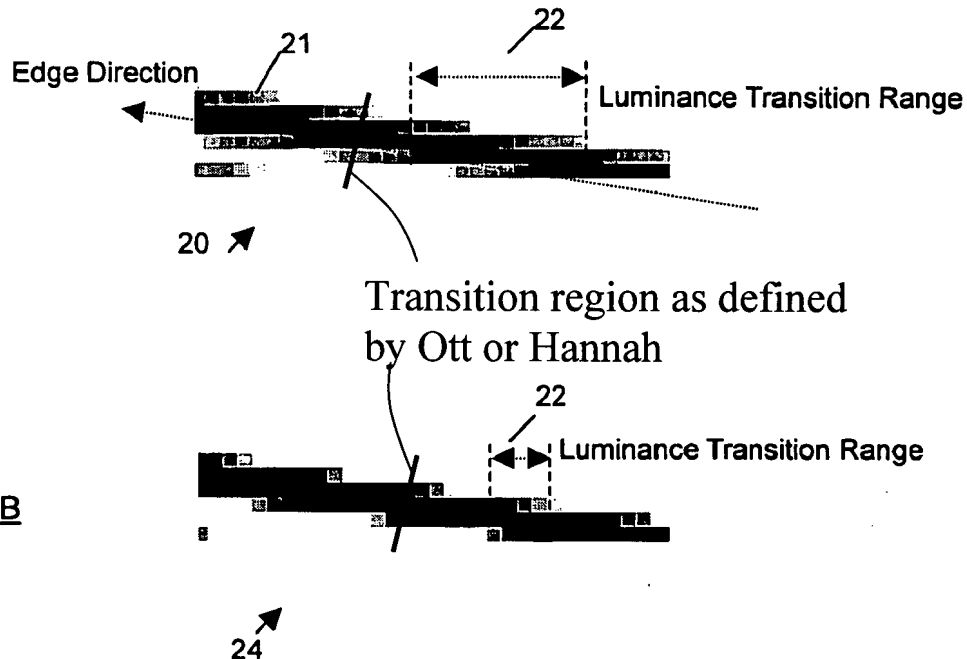


By contrast, the *transition region* as taught by Ott or Hannah, as shown in FIG. 3. of Ott (reproduced below), is completely different from the claimed “luminance transition range.”



Indeed, the *transition region* as taught by Ott or Hannah is *perpendicular to the edge* (see, e.g., col. 9, line 38 of Ott; and col. 8, lines 14-15 of Hannah), in contrast to the claimed “luminance transition range.” To help appreciate the difference between the *transition region* as taught by Ott or Hannah and the claimed “luminance transition range,” the transition region as taught by Ott or Hannah is overlaid on the Figs. 2A and 2B of the present application:

FIG. 2A



The above examples illustrate that a transition region as defined by Ott or Hannah is in a direction substantially orthogonal to the luminance transition length according to the present invention, and thus is completely different from the claimed “luminance transition range.”

Thus, Ott and Hannah, even if combined, fail to show or suggest the claimed invention as recited in independent claims 1 and 15 of the present application. Further, the rejections have been based on incorrectly equating the *transition region* as taught by Ott or Hannah to the claimed “luminance transition range.”

Applicant further respectfully submits that there is no reason, motivation or suggestion to combine Ott and Hannah or to make the modification as suggested by the Examiner. As discussed above, Ott and Hannah deal with the *transition region*, which is completely different from the claimed “luminance transition range.” Thus, in the transition region perpendicular to the edge as illustrated above, the zigzagged edge artifact is minimal because the transition between the regions is the shortest. Thus, there is no need for Ott or Hannah to take into account the zigzagged edge artifact. Further, as neither Ott nor Hannah teaches the “luminance transition range” as claimed, it is impossible for Ott and Hannah to avoid zigzagged edge artifacts using the claimed method which requires: detection of image pixels in the luminance transition range and then selectively reducing enhancement of the detected image pixels in the luminance transition range.

In view of the above, Ott and Hannah, whether considered separately or in combination, fail to show or suggest the claimed invention as recited in independent claims 1 and 15 of the present application. In addition, there is no reason, motivation or suggestion to combine Ott and Hannah or to modify the combination to arrive at the claimed invention. Thus, independent claims 1 and 15 of the present application are patentable over Ott and Hannah for at least the reasons set forth above. Accordingly, withdrawal of the rejections is respectfully requested.

Claims 2, 3, 16 and 17

Claims 2, 3, 16 and 17 stand rejected under 35 USC 103(a) as being unpatentable over Ott in view of Hannah, and further in view of U.S. Patent No. 6,628,842 ("Nagao"). For at least the following reasons, the rejections are respectfully traversed.

As discussed above, Ott and Hannah, separately or in combination, do not disclose the claimed "luminance transition range." Thus, Ott and Hannah also fail to show or suggest the claimed invention as recited in dependent claims 2, 3, 16 and 17. Nagao, as in Ott and Hannah discussed above, also fails to show or suggest the claimed invention as recited in dependent claims 2, 3, 16 and 17 as Nagao is also completely silent with respect to the claimed "luminance transition range."

In view of the above, Ott, Hannah and Nagao, whether considered separately or in any combination, fail to show or suggest the claimed invention as recited in claims 2, 3, 16 and 17 of the present application. In addition, there is no reason, motivation or suggestion to combine Ott, Hannah and Nagao, or to modify the combination to arrive at the claimed invention. Thus, claims 2, 3, 16 and 17 of the present application are patentable over Ott, Hannah and Nagao for at least the reasons set forth above. Accordingly, withdrawal of the rejections is respectfully requested.

Claims 11, 12, 25 and 26

Claims 11, 12, 25 and 26 stand rejected under 35 USC 103(a) as being unpatentable over Ott in view of Hannah, and further in view of U.S. Patent No. 6,252,995 (“Takamori”). For at least the following reasons, the rejections are respectfully traversed.

As discussed above, Ott and Hannah, separately or in combination, do not disclose the claimed “luminance transition range.” Thus, Ott and Hannah also fail to show or suggest the claimed invention as recited in dependent claims 11, 12, 25 and 26. Takamori, as in Ott and Hannah discussed above, also fails to show or suggest the claimed invention as recited in dependent claims 11, 12, 25 and 26 as Takamori is also completely silent with respect to the claimed “luminance transition range.”

In view of the above, Ott, Hannah and Takamori, whether considered separately or in any combination, fail to show or suggest the claimed invention as recited in claims 11, 12, 25 and 26 of the present application. In addition, there is no reason, motivation or suggestion to combine Ott, Hannah and Takamori, or to modify the combination to arrive at the claimed invention. Thus, claims 11, 12, 25 and 26 of the present application are patentable over Ott, Hannah and Takamori for at least the reasons set forth above. Accordingly, withdrawal of the rejections is respectfully requested.

Claim 13

Claim 13 stands rejected under 35 USC 103(a) as being unpatentable over Ott in view of Hannah, and further in view of U.S. Patent No. 5,050,227 (“Furusawa”). For at least the following reasons, the rejection is respectfully traversed.

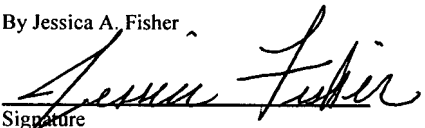
As discussed above, Ott and Hannah, separately or in combination, do not disclose the claimed “luminance transition range.” Thus, Ott and Hannah also fail to show or suggest the claimed invention as recited in dependent claim 13. Furusawa, as in Ott and Hannah discussed above, also fails to show or suggest the claimed invention as recited in dependent claim 13 as Furusawa is also completely silent with respect to the claimed “luminance transition range.”

In view of the above, Ott, Hannah and Furusawa, whether considered separately or in any combination, fail to show or suggest the claimed invention as recited in claim 13 of the present application. In addition, there is no reason, motivation or suggestion to combine Ott, Hannah and Furusawa, or to modify the combination to arrive at the claimed invention. Thus, claim 13 of the present application is patentable over Ott, Hannah and Furusawa for at least the reasons set forth above. Accordingly, withdrawal of the rejection is respectfully requested.

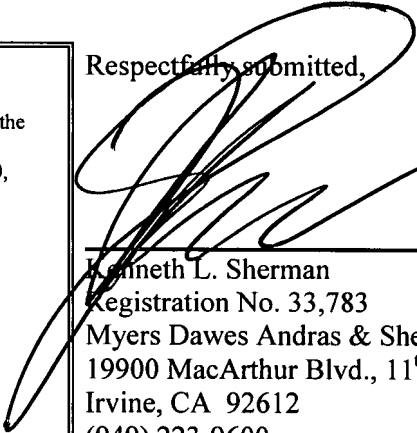
CONCLUSION

In view of the foregoing remarks, Applicant respectfully requests that the rejections of the claims be withdrawn, and that the case be passed to issue. If the Examiner feels that a telephone interview would be helpful to the further prosecution of this case, Applicant respectfully requests that the undersigned attorney be contacted at the listed telephone number.

Please direct all correspondence to **Myers, Dawes Andras & Sherman, LLP**,
19900 MacArthur Blvd., 11th Floor, Irvine, California 92612.

<u>CERTIFICATE OF MAILING</u>	
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: MS AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on August <u>15</u> , 2007.	
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Signature	

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